

CLAIM AMENDMENTS

Claims 1-4 (cancelled).

Claim 5 (currently amended):

A miter saw comprising:

a base assembly defining a cutting zone and configured to support workpieces in the cutting zone;

a pivot arm coupled to the base assembly and selectively moveable toward and away from the cutting zone;

a tilt mechanism between the base assembly and the pivot arm, where the tilt mechanism is configured so that the pivot arm may tilt relative to the base assembly;

a motor assembly;

a rotatable arbor supported by the pivot arm and driven by the motor assembly;

a rotatable blade mounted on the arbor and configured to cut workpieces supported within the cutting zone;

a detection system configured to detect one or more dangerous conditions between a person and the blade; and

a reaction system configured to urge the pivot arm away from the base assembly upon detection by the detection system of the one or more dangerous conditions;

~~The miter saw of claim 4, where the reaction system comprises a brace member and a retraction assembly; where the brace member is~~

coupled to the tilt mechanism and the retraction assembly; where the retraction assembly is coupled to the pivot arm; and where the retraction assembly is configured to grip the brace member and urge the pivot arm upward away from the base assembly when the detection system detects the one or more dangerous conditions between a person and the blade.

Claim 6 (original):

The miter saw of claim 5, where the brace member comprises a elongate shaft pivotally coupled to the tilt mechanism.

Claim 7 (currently amended):

The miter saw of claim 6, where at least a portion of the shaft is serrated.

Claim 8 (original):

The miter saw of claim 5, where the retraction assembly comprises:
a housing pivotally coupled to the pivot arm, where the housing is adapted to slidably receive the brace member;
a clamping device adapted to grip the brace member; and
a drive mechanism adapted to urge the housing upward relative to the clamping device.

Claim 9 (original):

The miter saw of claim 8, where the retraction assembly further comprises:

a restraining mechanism configured to maintain the clamping device in a nominal position until the detection system detects the one or more dangerous conditions.

Claim 10 (original):

The miter saw of claim 9, where the restraining mechanism comprises a collapsible structure.

Claims 11 (original):

The miter saw of claim 10, further comprising a fusible member adapted to prevent the collapsible structure from collapsing until the detection system detects the one or more dangerous conditions.

Claim 12 (original):

The miter saw of claim 8, where the drive mechanism includes at least one spring.

Claim 13 (original):

The miter saw of claim 12, where the at least one spring comprises a stack of Belville springs.

Claim 14 (original):

The miter saw of claim 8, where the drive mechanism is configured to provide an upward force relative to the base assembly in the range of 100 to 500 pounds.

Claim 15 (currently amended):

A miter saw comprising:

a base assembly defining a cutting zone and configured to support workpieces in the cutting zone;

a pivot arm coupled to the base assembly and selectively moveable toward and away from the cutting zone;

a motor assembly;

a rotatable arbor supported by the pivot arm and driven by the motor assembly;

a rotatable blade mounted on the arbor and configured to cut workpieces supported within the cutting zone;

a detection system configured to detect one or more dangerous conditions between a person and the blade; and

reaction means for urging the pivot arm away from the base assembly upon detection by the detection system of the one or more dangerous conditions;

where the reaction means includes a brace member and retraction means for gripping the brace member and for urging the pivot arm upward away from the base assembly when the detection system detects the one or more dangerous conditions between a person and the blade; where the brace member is coupled to the tilt mechanism and the retraction means; and where the retraction means is coupled to the pivot arm.

Claim 16 (new):

The miter saw of claim 8, where the clamping device includes an orifice through which the brace member extends.

Claim 17 (new):

The miter saw of claim 16, where the orifice has sides and where the sides of the orifice are adapted to press against the brace member to releasably lock the clamping device onto the brace member.

Claim 18 (new):

The miter saw of claim 8, where the housing includes an upper wall and where the drive mechanism is disposed between the clamping device and the upper wall.

Claim 19 (new):

The miter saw of claim 8, further comprising a yieldable support device adapted to support the clamping device.

Claim 20 (new):

The miter saw of claim 19, where the yieldable support device is a spring.

Claim 21 (new):

The miter saw of claim 9, where the restraining member includes a brace and a collapsible base.

Claim 22 (new):

The miter saw of claim 21, where the brace and collapsible base each have a lower end that includes a beveled region.

Claim 23 (new):

The miter saw of claim 21, where the restraining member further includes a buttress structure and a stabilizer member.

Claim 24 (new):

The miter saw of claim 23, further comprising a fusible member configured to hold the stabilizer member against the brace and collapsible base.